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ABSTRACT

Ability tests in use today and the educational programs of the schools are examined from a Black perspective. It is stated that it is incumbent upon educators to develop appropriate learning experiences in the classroom which relate to the Black child's background experiences. The following issues are raised: (1) I.Q. tests (predictor variables) are biased in favor of white children and against Black children, (2) educational programs (criterion variables) are biased against Black children, (3) the structural similarity and content of items in educational program and ability tests are near isomorphic or point to point, (4) statistical prediction is based on the relationship observed between predictor variables (ability tests) and criterion variables (scholastic performance). Correlational statistics involves the relationship between two variables only--the better the match between the two variables, the higher the correlation and the better the predictive power is likely to be; when the match between the two variables is poor, the correlation and predictive power are also poor. It is stated to be a well-known fact that ability tests, i.e., predictor variables, are biased in favor of native-born white American children. It is contended that the school system has served as a biased criterion and is related to the biased predictor. Using test bias as moderators for both predictor and criterion variables, the fallacies of previous studies involving Black children are pointed out. (DB)

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THE PROBLEM OF THE MATCH AND MIS-MATCH IN TESTING BLACK CHILDREN

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Psychologists have known for many years that ability tests are biased in favor of white, native born American children or the population for whom the tests were standardized. Yet these same tests continue to be administered to Black children who were not included or represented in the original normative sample. As discussed by Williams (1970 in Abuses & Misuses) legal and constitutional rights of the Black child are being seriously violated. What is more serious the educational systems are carbon copies of the tests. Yes the tests shape teacher expectations and influence the educational process and curricula development. The use of so-called standardized tests in schools is widespread. Tests scores are use not only to evaluate sutdent progress, but more subtly teacher efficiency. Ability tests have been powerful instruments in shaping the educational system as it exists today. It is therefore imperative that Black psychologists, educators and other professionalists break the lock-step in educational systems which require the majority of Black children to be exposed to the same educational processess as they was designed for white children. The fact that many educational programs have their curricula designed, on the one hand, for the culturally privileged and on a deficit model for Blacks makes it even more imperative for us to reconsider the educational structure.

It is clear that Black children show a "readiness" for different sets of learning materials than white children during elementary school,

largely due to differences in cultural backgrounds and exposures. Here again, this does not mean that the Black child is deficient or lacks the capacity, or ability to master skills at the same time as the white counterpart. The fact is that his unique background learning experiences have prepared him for a different reality and tasks than is frequently the case of the white child. Black children are prepared to be independent and for survival rather than for intellectual or academic excellence. This results in certain dis-continuities for Black children in educational systems as defined by Hunt "the problem of the match."

> "If encountering a given set of circumstances is to induce psychological development in the child, these circumstances must have an appropriate relationship to the information already accumulated in the child's mental storage from his previous encounters with circumstances. (Hunt 1969, p. 129)

A discontinuity or incogruity rather than continuity occurs between the Black child's set of background circumstances and those required by the school system. The need is to develop educational models which plug into the Black child's linguistic and cognitive styles at the time of his initial exposure to formalized education in order to capture his interest. It is inappropriate to continue to develop educational models which are not isomorphic to Black cognitive styles. A match can be accompolished by making a Black child's learning experiences related to information he already has in his mental storage. For educational programs to be meaningful, therefore, they must be adapted to the child instead of requiring the child to adapt to the program.

The Match Between Ability Tests and Educational Programs: A frequent argument for the continued use of ability or I.Q. tests is that "They do what they are suppose to do (predict scholastic achievement) and they do it well." A hidden fallacy related to the probelm of the match resides in this argument and should be examined from a Black perspective.

According to this nation learning is contingent upon the similarity of the experiences which the child has in his repertoire and the material to be learned. The best indications that an appropriate match has been made is indicated by the extent that the child a) maintains an interest in the material, b) is familiar with the material. If the experiences of the child and the educational material are not matched, he will withdraw and will not learn. This phenomenon is commonly referred to as "drop out," particularly in children who enter the educational system from a cultural base, that is dissimilation to that of the educational system. Only the child suffers when such a mis-match has occurred. Pre-planned, inflexible educational programs do not and cannot respond to the educational needs of Black children.

Frequently the Black child is during quite well in his home and neighborhood environment, but does poorly in the school system. He clearly shows every indication of "brightness" at home. It is incumbent upon educators to develop appropriate learning experiences in the classroom which relate to the Black child's background experiences and not the other way around. Several issues are clear: (1) I.Q. tests (predictor variables) are biased in favor of white children and against Black children (2) educational programs (criterion variables) are biased against Black children (3) the structural similarity and content of items in educational program and ability tests are near isomorphic or point to point (4) statistical prediction is based on the relationship observed between predictor variables (ability tests) and criterion variables (scholastic performance). If both the predictor and the criterion are based, then all previous correlational studies involving the prediction of the Black child's performance in contemporary American education must be seriously challenged. Well-known psychologists have knowingly violated these basic principles of

statistical forecasting by predicting from a biased predictor to a biased criterion. One would logically expect a high correlation.

It is not the purpose of this paper, however, to discuss statistics and methods of analysis, but it will be important to observe briefly from a different perspective certain fallacies present in previous correlational studies involving Black children. Correlational statistics involves the relationship between two and only two variables. (The better the match between the two variables, the higher the correlation and the better the predictive power is likely to be. Conversely, when the match between the two variables is poor, the correlation and predictive power are accordingly

Psychological prediction involves at least seven steps: 1) selection of predictor variables (i.e. independent variables), 2) selection of criterion variables (i.e. dependent variables) 3) description of the population 4) selection of a representative sample from the defined population by strafied or random methods 5) a determination of the relationship (i.e. the correlation) between the predictor and the criterion variables 6) cross validation and application on a new sample drawn from the original population 7) verification by determining the degree to which the predictor and criterion variables agree in the original and new samples. The foregoing statements are not new thoughts, psychologists have been aware for many years of the problem of the match (or mis-match) as it applies to testing Black children. Although emphaszing the need for representation, randomness, clarity of research design appropriate comparative methods and other fancy and sophisticated stastical procedures, it is suprising albeit alarming, that psychologists ignored or over looked this simplistic consideration in correlational analysis. It is not only well known, but well documented that ability tests (i.e. predictor variables)

are biased in favor of native born white American children or the population on whom the tests were standardized and for whom they were intended to be used. From a scientific perspective then, it is required that the instruments be used only for whom they represent. For example, a test normed on female population could not be appropriately used on a male sample. Men and women require different norms. Representative samples are required from both populations if the researcher will want to generalize his results to both population. Considerable error may occur if he has clearly excluded one group in his normative sample.

> "Such is the case of the Binet and WISC. Blacks were deliberately and systematically excluded from the representative sample. The reasons are unclear except for blatant racial exclusion. Recent reports are that the Psychological Corporation is re-standardizing the WISC using 10-12% (or using stratafied sampling techniques) of Blacks and other minorities in the sample. This is clearly unacceptable. First of all, minorities comprise about 16-20% of the total population. Thus, 10-12% is too low. A more effective method to achieve representativeness would be to select the population by some random method, say lottery so that every child would have a equal chance to be selected. In order to select a representative a sample, then, which meets the conditions of randomness, it is necessary to define the population and make it possible for every member of that population to be selected."

All ability tests are basically achievement tests - nothing more. They measure what one has learned through formal or informal teaching methods. These tests contain items such as arithmetic, information, vocabulary, etc., and rely heavily on what the person has achieved in our society. Thus, the school plays a large role here. My contention is that the school system has served as a biased criterion and is related to the biased predictor.

The notion of the Problem of the Match leads directly then to a consideration of the "fairness" or "unfairness" of tests as they relate to predictor and criterion variables. A variety of moderators have been identified. Interest, motivation, have been identified as moderators of a test's validity (Anastasi). It is reasonable to conclude that for Black children, and fairness or bias of the material will also function as moderators.

The literature on the moderator variable seems relevant to the questions under consideration here. Saunders (1956) pointed out the presence of such demographic variables as sex and socio-economic status (SES) as moderator variables. Stricker (1966) confirmed the notion that compulsivity influences test scores. Hobert and Dunnette (1967) demonstrated the utility of moderators in selecting managers. Prediction was improved by using factors not commonly used in correlational analysis. Lykken and Rose (1963) suggested a theoretical model which seems particulary relevant here. They state: "The predictability of Y from X varies as a function of Z, although Z may be uncorrelated with either Y or X" p. 142. Thus the consideration:

Let X= tests (predictor variables)

Y= Academic performance (criterion variables)

Z= Bias (moderator variables)

Although Z (unfairness or bias) may be uncorrelated with X or Y, its presence or absence will influence the relationship between X and Y. Using test bias then as moderators for both predictor and criterion variables, the fallacies of previous studies involving Black children can be seen (Table I).

	Criterion Y	
	Z Absent	Z Present
Z Absent	Expected High	Expected Lo
Z Present	Expected Lo	Expected High

Table I The Effects of a Moderator Variable or the relationship between Predictor and Criterion Variables

Another way of looking at the relationship between X and Y when Z is present or absent is seen examined under four matching or mis-matching conditions as follows (Figure I)

Figure I - Effects of Z

1) Z absent in both X and Y (match)

2) Z present in X but absent in Y (mis-match)

3) Z absent in X but presence in Y (mis-match)

4) Z present in both X and Y (match)

On logical grounds it is expected that matching conditions yield high correlations, whereas mis-matching conditions yield low correlations. Z is defined solely as bias in both the predictor and the criterion variables. Thus, in situations where Z is present in one variable and not in the other (e.g. #2 and #3) the prediction of Y from X will be affected and in all probability, the correlation will be low. In cases where Z is absent in both X and Y (e.g. #1) the correlation is expected to be high and uninfluenced. That is those who earn high scores on the predictor will be expected to earn high scores on the criterion. In cases, however, where Z is present in both X and Y (e.g. #4), the correlation is also expected to be high but the scores on both X and Y are expected to be influenced (low) due to the negative effects of Z. The correlation remains high but for different reasons than in #1.